#### Before the

**FEDERAL COMMUNICATIONS COMMISSION**

**Washington, D.C. 20554**

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| In the Matter of  Use of Spectrum Bands Above 24 GHz For Mobile Radio Services  Establishing a More Flexible Framework to Facilitate Satellite Operations in the 27.5-28.35 GHz and 37.5-40 GHz Bands Petition for Rulemaking of the Fixed Wireless Communications Coalition to Create Service Rules for the 42-43.5 GHz BandAmendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio ServicesAllocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations  |  | GN Docket No. 14-177IB Docket No. 15-256RM-11664WT Docket No. 10-112IB Docket No. 97-95 |

**Via the ECFS**

**Comments Of IEEE 802**

1. IEEE 802[[1]](#footnote-1) respectfully submits its Comments in the above-captioned Proceeding[[2]](#footnote-2).
2. IEEE 802, as a leading consensus-based industry standards body, produces standards for wireless networking devices, including wireless local area networks (“WLANs”), wireless personal area networks (“WPANs”), wireless metropolitan area networks (“Wireless MANs”), and wireless regional area networks (“WRANs”). Included in our standards development activity is an emphasis on coexistence, which is the focus of our Wireless Coexistence working group. We appreciate the opportunity to provide these comments to the FCC.

**Preface**

1. On October 22, 2015, the Commission issued a Notice of Proposed Rulemaking, under GN Docket No. 14-177 and others, in which the Commission seeks to “continue our examination of higher frequency bands for mobile and other uses.” IEEE 802 is pleased to submit these comments in response to this proceeding.

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# Introduction

1. In submitting these comments, IEEE 802 is particularly interested in promoting increased availability of unlicensed spectrum at frequencies above 57 GHz. IEEE 802 has published amendments to the IEEE 802.11 (“802.11”) and the IEEE 802.15 (“802.15”) standards which detail both Physical (“PHY”) and Media Access Control (“MAC”) layers suitable for implementation in the 60 GHz bands. There are new 60 GHz initiatives underway for both standards groups.Working Group (WG) IEEE 802.11 has established a Task Group (TG) IEEE 802.11ay which is looking at improvements to the previous 60 GHz standard, IEEE 802.11ad, encompassing a range new applications while also looking at performance enhancements of existing ones’. WG IEEE 802.15 has a TG IEEE 802.15.3d which is developing is developing an amendment to the IEEE 802.15.3 standard for 100 Gb/s wireless links, and a TG IEEE 802.15.3e is developing an amendment to the same standard to enable large files to be exchanged rapidly between two devices at very close range.

# 60 GHz Bands (57-64 GHz and 64-71 GHz)

1. In the NPRM, the Commission points out that current rules permit unlicensed operation in 57 to 64 GHz band under Part 15, and is proposing to extend the spectrum band up to 71 GHz thus proposing to have a contigueous spectrum band from 57 to 71 GHz for PART 15 operation. IEEE 802 sees this extension of the 60 GHz band as a positive change to the Commission’s rules, and recommends that the Commission proceed with extending the band to cover 57 to 71 GHz under the same Part 15 general provisions that allow operation in the currently authorized 60 GHz band.
2. Maintaining the same uniform emissions across the 57-71 GHz band that are specified for the 57 to 64 GHz band will permit manufacturers to apply the same uniform limits to their products. We believe that this will not only support economies of scale but also support new usages as well as enhancements to the presently envisioned usages for both indoors and outdoors. Further, as the Commission noted, maintiaing same power levels would allow longer ranges in the extended band due to the properties of the spectrum. This is particulary helpful point-to-point and point-to-multipoint outdoor appliactions.
3. For the emissions limits applicable to **lower power rules** (Part 15.255.xxxxx), we would like the commission to consider raising the exsiting emission limits by 10 dB. Specifically, we recommed the EIRP be raised to to 50 dBm for average emissions and 53 dBm for peak emissions.
4. The commission noted the joint work (collaboration) between industry and the government inside the cabin for consumer use. IEEE 802 believes that given the intended usage, properties of the spectrum, and aircraft attenuation of emission, there should no interference to radio astronomy and EESS operation.
5. In a related matter, the commision asked whether on-board aircraft usage restriction be applied to the extension band 65-71 GHz. Again, IEEE 802 believes that given the properties of the spectrum band, usage, and fuselage attenuation of emissions, no such restrictions be placed on the extension band.
6. The commission is proposing to remove section 15.255(d) which sets aside publicly-accessible coordination channel at 57.00-57.05 GHz due to little or no use. We support commission’s proposal to make additional 50 MHz available for data transmission.

# Conclusion

1. IEEE 802 supports the Commission’s concept of extending the existing Part 15 unlicensed rules to increase the 60 GHz band from the present 57 to 64 GHz to 57 to 71 GHz.
2. IEEE 802 thanks the Commission the opportunity to respond to this Notice of Inquiry.

Respectfully submitted,

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| /s/ Paul Nikolich |
| **Paul Nikolich** |
| Chair, IEEE 802 LAN/MAN Standards CommitteeIEEE802radioreg@ieee.org |

1. The IEEE Local and Metropolitan Area Networks Standards Committee (“IEEE 802” or the “LMSC”). [↑](#footnote-ref-1)
2. This document represents the views of IEEE 802. It does not necessarily represent the views of the IEEE as a whole or the IEEE Standards Association as a whole. [↑](#footnote-ref-2)